

KING COUNTY INTERNATIONAL AIRPORT

**ROUNDTABLE**

Report To  
King County Executive  
And  
King County Council

Re:  
King County International Airport Master Plan

May 1998

# KING COUNTY INTERNATIONAL AIRPORT ROUNDTABLE

## MEMBERS

<u>Position</u>	<u>Representing</u>	<u>Name</u>
1	Georgetown	Randy Eatherton
2	West Seattle	Cathy Mooney
3	Unincorporated	Georgianne Ray
4	Magnolia/North Seattle	David Dougherty
5	Tukwila	Rosemary Unterseher
6	Renton/Kent/ South King Co.	Vacant
7	Beacon Hill/Rainier Valley	Lynn Tucker
8	Community At-Large	Charlie Cuniff <sup>1</sup>
9	Business Indirect Users	Randy Banneker
10	Pilots Associations	Jim Combs (Chair)
11	Corporate Operators	Jim Bennett
12	Boeing	Frank Figg
13	Cargo Operators (UPS)	Doug Baker
14	Labor (SPEEA)	Dan Hartley
15	Small GA	Karen Walling
16	Labor (Machinists)	Larry Brown
Ex Officio	Federal Aviation Administration	John Current
	Winter, Jeffrey	
Airport Manager		Cynthia Stewart
Airport Master Plan Project Manager		Clare Impett

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<sup>1</sup> Appointment Pending

**KING COUNTY INTERNATIONAL AIRPORT  
ROUNDTABLE  
Report to King County Executive  
and  
King County Council  
Re:  
King County International Airport Master Plan**

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## **Introduction**

This purpose of this report is to provide county elected officials with the Roundtable's recommendations on the conceptual development plan phase of the Airport Master Plan.

The King County International Airport (KCIA) Roundtable was initiated in September 1997. Since September, the Roundtable has met more than a dozen times to be oriented to the Airport, develop bylaws and ground rules, receive training in interest based bargaining and review the consultant proposed conceptual development plan for the Airport Master Plan. Additionally, the Roundtable reviewed comments received on the consultant proposed conceptual development plan at a public meeting held at the Airport on February 18, 1998 and comments from the Citizens Ad Hoc Noise Committee regarding noise mitigation measures that they recommend.

While reviewing the consultant's proposal and the public comments, the Roundtable worked steadily to try and achieve consensus on its recommendations to the county elected officials. However, consensus was not always possible. Thus, this report reflects the majority opinion of the Roundtable and describes areas where there was not agreement. A minority report is being submitted under separate cover.

In summary, the Roundtable's recommendations related to the conceptual development plan – that is, the proposal which will be used as the preferred alternative in the environmental impact statement and for the FAR Part 150 Noise Remedies and Land Use Compatibility Study (Part 150 Study) - are as follows. Additional discussion of each of these recommendations is also provided in this report.

**RECOMMENDATION:** The conceptual development plan for the KCIA Master Plan should include the following elements:

1. 24-hour per day service at KCIA should be continued.
2. The nonconforming safety area at the south end of the long runway should be addressed and a conforming safety area should be established; however, in so doing, the long runway takeoff length of 10,000 feet should be maintained by adding 800 feet of pavement, provided that the impact of using this shifted runway length is mitigated by limiting use of the northernmost 800 feet to takeoffs for certification testing or weather conditions and asking all other operators to use the current runway end for takeoffs to the south; and is further mitigated by construction of an acoustical wall at the north end of the Airport.
3. The consultant's recommended land use allocations, which generally parallel current uses, should be accepted;
  - provided that current and future night time runup noises are mitigated by construction of a noise containment facility ("hush house") at a location which remains to be determined; and

- provided that while moving the fuel tanks to comply with safety area requirements, the tanks are also moved away from the Georgetown residential area.

**RECOMMENDATION:** The Part 150 Study should consider and analyze a variety of strategies, including but not limited to the following. The Study should not result in just moving the problem and all aspects of the study should be communicated in plain-speak so that they are easily understood by the general public.

- Incentives for operators that are less noisy and use modern technology and for those that restrict night operations
- Pilot training for carriers with scheduled night flights to use quieter flying techniques
- Caps on the accepted noise impacts
- Flight path changes and noise abatement procedures such as flying over the industrial area in the Kent Valley before turning when departing to the south, an over water approach from the north, minimizing reverse thrust cut-backs, delaying final flap landing configuration, and higher angles of arrival and departure
- Combined Sea-Tac and KCIA traffic control
- Installation and use of the earliest possible GPS system to be used by all aircraft flying IFR
- Noise abatement power settings to be used during takeoff
- Strategies to address low frequency vibrations in addition to noise
- Requirement that all operators, even those aircraft below 75,000 pounds, be Stage III
- Strategies to address single event impacts and not just averaged events that create conventional contours
- Strategies to address cumulative impacts accruing to those residing below both Sea-Tac and KCIA traffic
- Economic reparations for residents outside the 65 dnl contour who are significantly impacted by KCIA noise events
- Other facility (acoustical) remedies to protect surrounding communities should be explored

**RECOMMENDATION:** The Airport should proceed with the budgeted air quality study and evaluate its recommendations.

**RECOMMENDATION:** The Airport should put an environmental management system in place if there is not already one and require environmental/soil testing when tenants change. In addition, the Airport should encourage its tenants to work with local government agencies to reduce and substitute for hazardous materials where possible

**RECOMMENDATION:** The moratorium on new and extended long-term leases which was instituted pursuant to Motion 9709 should be rescinded.

## **Roundtable Function**

The Roundtable's role in evaluating Master Plan recommendations and putting forth its own recommendations to county elected officials comes from the charge to the Roundtable specified in Ordinance 12785:

*The roundtable shall advise and make recommendations to the airport management, county executive and county council on the airport budget, programs, regulations, master plans and noise reduction strategies and other related matters.*

Based on this mission and the timing of the Master Plan project, the Roundtable selected the Master Plan as its first project.

## **Airport Mission, Values and Vision**

The Roundtable first addressed the KCIA mission statement. Roundtable members believe that before a Master Plan can be considered, the Airport's mission must be clear. The Plan should address how the mission should be achieved. The mission statement, values and vision which follow were adopted by consensus of the Roundtable.

**RECOMMENDATION: The mission, values and vision statements for King County International Airport should be as follows:**

### **Mission:**

**The mission of the King County International Airport is to support the economic vitality of the county, to support the national air transportation system, to encourage advanced technology, to provide safe and continuous general aviation airport services to King County businesses and residents and to serve as a gateway to the county. In fulfilling this mission, the Airport will be a good neighbor and an environmental steward and will provide quality facilities to Airport tenants and operators in an efficient, environmentally safe and fiscally prudent manner.**

### **Values:**

- Safety is crucial
- Economic vitality
- Responsiveness to the area economy
- Looking to the future
- Environmentally sound
- Collaborative in community
- Innovative
- National leader
- Support state-of-the-art manufacturing

**Vision:**

**By the year 2018, the King County International Airport will be a national leader in developing partnerships with the King County community, businesses and residents to provide airport facilities and services which are environmentally and economically sound and ensure our community's well being.**

**Planning Process**

The Airport Master Plan is a guide for airport management in directing the future development of the airport. The Plan is based on a 20-year planning period for forecasting and capital planning purposes. However, it is assumed that the master plan will be reviewed and updated about every five to ten years to assure that it remains appropriate to current conditions. The last Master Plan for KCIA/Boeing Field was prepared in 1985-7 and adopted by the King County Council in 1987. Many conditions have changed since the last Plan was adopted.

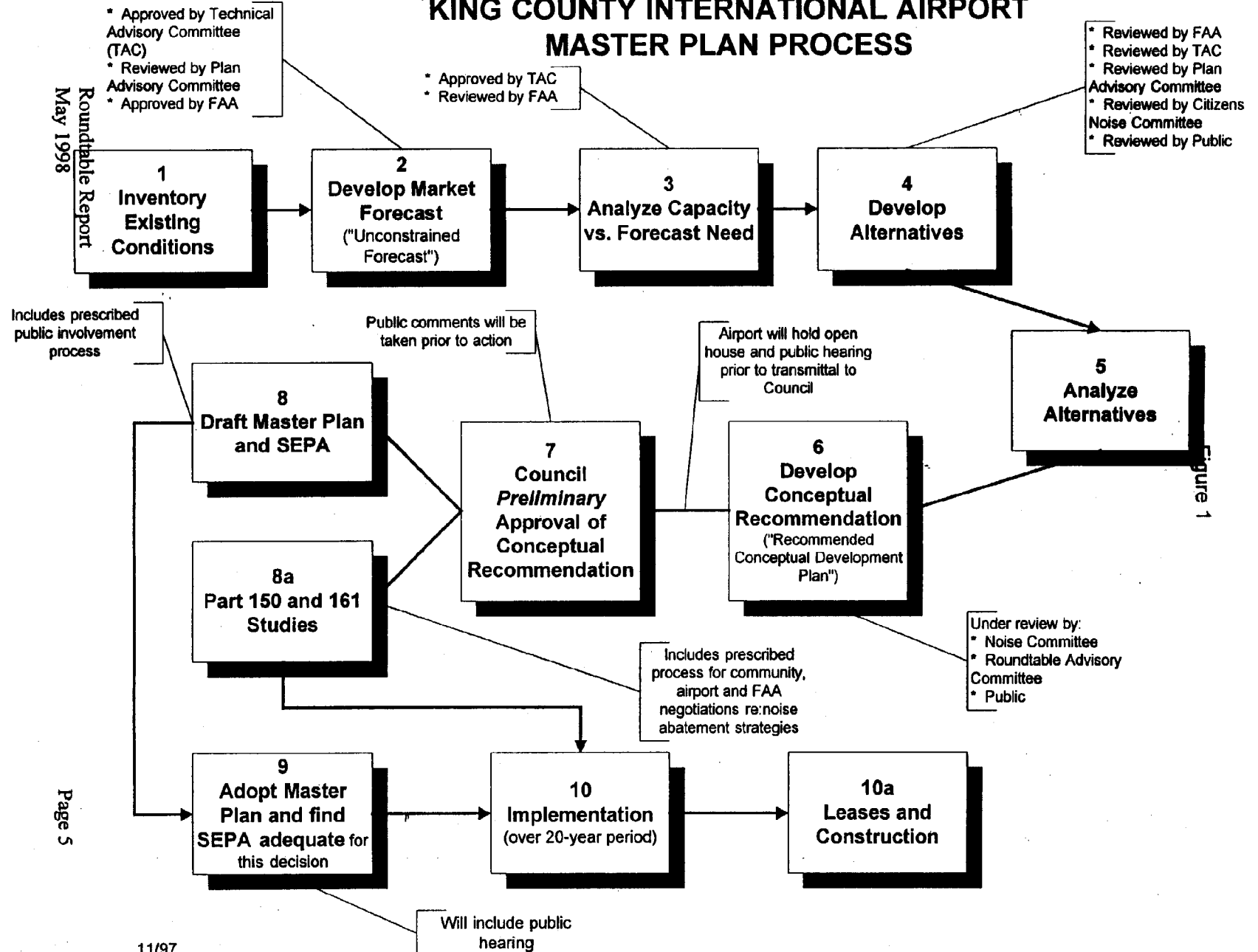
The Master Plan development process involves the following steps with associated public comment periods. A flow chart of these planning steps is shown as Figure 1.

1. Inventory of existing conditions
2. Forecasts of future unconstrained demand for service
3. Analysis of Airport capacity to accommodate forecast demand
4. Development of alternatives
5. Analysis of alternatives
6. Development of a conceptual development plan
7. Environmental review of conceptual development plan
8. Development of a draft plan, including constrained forecast
9. Development of final master plan
10. Adoption of final master plan

**Existing Conditions**

As a group, the Roundtable did not review work done by the Master Plan consultants on existing conditions. To the extent that the existing conditions present environmental concerns, they should be addressed in the environmental impact statement (EIS), which the Roundtable will review in draft form.

# KING COUNTY INTERNATIONAL AIRPORT MASTER PLAN PROCESS



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May 1998

Figure 1

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## **Forecasts and Capacity**

Forecasts of unconstrained demand for the Airport (unconstrained demand is the demand that would exist if there were no constraints on the Airport's capacity to provide service) assume that demand for the Airport's role as a general aviation reliever airport will continue. That is, there will continue to be demand for serving traffic that is largely incompatible with Sea-Tac's operations and there will be growth in demand from each sector of aviation.

Table 1 Revised Unconstrained Operations Forecast				
		1997	2015	% change
Gen Aviation		311,313	431,800	38.7%
Military		2,243	3,000	33.7%
Air Cargo		23,750	37,632	58.5%
Aerospace		2,950	5,500	86.4%
Passenger		2,000	10,200	410.0%
Air Taxi		28,812	49,051	70.2%
Total		371,068	537,183	44.8%
Current Operations	Transient	60%	TBD	
	Based	40%	TBD	

The Roundtable understands that the entire forecast unconstrained demand for Airport services cannot be met. All alternatives considered by the Plan consultants involved forecast increases over 1997 levels of operations, but none of the alternatives could meet all of the projected future demand. The objective for the Plan is to identify the best uses for the limited amount of developable land surrounding the runway system in light of the high level of demand for that land. The following table portrays the projected use of the Airport under the consultant's proposed conceptual development plan (the "constrained" demand).

Table 2: Forecast Operations Conceptual Development Plan					
	1997	Unconstrained 2015	Projected 2015 per Conc.Dev. Plan	Rec % of Unconstrained Forecast	% Increase over 1997
Gen Aviation	311,313	431,800	458,700	95.4%	34.8%
Military	2,243	3,000	3,000	100.0%	33.7%
Air Cargo	23,750	37,632	29,400	78.1%	23.8%
Aerospace	2,950	5,500	5,500	100.0%	86.4%
Passenger	2,000	10,200	8,700	85.3%	335%
Air Taxi	28,812	49,051	See GA <sup>1</sup>	See GA <sup>2</sup>	
Total	371,068	537,183	505,300	94.1%	36.2%

<sup>1</sup> Combined with GA

<sup>2</sup> Combined with GA

## Alternatives

The Airport presented six alternatives and a consultant-recommended preferred alternative for public comment during the fall of 1997. These alternatives each maintained the mix of uses present at the Airport but emphasized a different sector of the general aviation market. These alternatives ruled out closing the Airport, expanding the Airport and provision of major passenger service.

The consultants recommended that two of the six original alternatives be rejected because they did not meet the federal standards of non-interference with interstate commerce and non-discrimination among (classes of) users. Among the remaining four alternatives, one was selected and modified slightly as the consultant recommendation for the conceptual development plan.

During the Fall, 1997 public comment period, the consultants used for developing the Plan changed. At that time it became clear that one key issue was not addressed in earlier work by the previous consultants. The Federal Aviation Administration (FAA) provided a letter that pointed out that the Airport's long runway does not meet federal safety standards. Although this non-conforming condition is not new, FAA policy now requires that airports address non-conforming safety areas when they rehabilitate or construct runways. Since KCIA must perform some runway rehabilitation during the 20-year planning horizon for this Master Plan, the non-conforming condition must be addressed by the Master Plan.

Thus the consultants proposed a different conceptual development plan early in 1998 that ruled out several other alternatives previously considered. This proposal was presented in a public meeting in February 1998 and extensively considered by the Roundtable.

This proposal assumes the following:

- The most feasible method of addressing the non-conforming safety area at the south end of the long runway while maintaining 10,000 feet of runway length for takeoffs in both directions is to pave an additional 800 feet at the north end of the runway and shift the takeoff area 800 feet to the north accordingly. Condemnation of property to the south in order to create a larger (conforming) safety area to the south does not work because of the alignment of the railroad tracks, Airport Way and the freeway; the farther south the safety area is located, the more of these obstructions would actually fall within the proposed safety area.
- Development of the remaining large block of land which remains in non-aviation use (the NW corner of the Airport) for aviation use will not be feasible because no taxiway access will be possible when the runway is shifted to address safety area concerns on the south end.
- A future land use pattern that retains approximately the current configuration (providing the deepest parcels for larger plane activity and reserving the narrower

parcels for small plane activity) is the most efficient way to sustain a balance of uses at the Airport.

- The historic Steam Plant will not be affected by the proposal. Although the current access to the Steam Plant is via right of way granted to the City of Seattle through the runway protection zone at the north end of the runway, a new access route can be developed which will direct Steam Plant traffic out of the safety area and runway protection zone.

### **Description of Consultant's Recommended Conceptual Development Plan**

Figure 2, the last page in this packet, is a map of the consultant's recommended conceptual development plan. This map shows:

- Future 800 foot displaced threshold on the south end of Runway 31L (long runway)
- Potential need to establish a 200 foot displaced threshold on the south end of Runway 31R (short runway)
- Existing and future approach threshold at the current north end of Runway 13R (long runway)
- Proposed 800 feet of new pavement at north end of Runway 13R (long runway)
- Proposed relocation of fuel farm at north end of Airport (future location to be determined)
- Screen wall and plantings at north end of Airport
- Future public access road for Steam Plant (exact route to be determined)
- Consolidated cargo use on parcels immediately to the south of the Terminal and Arrivals Buildings (parcels now known as EMF site and Ameriflight site)
- Consolidated cargo use on several parcels (parcels now known as Airwest Sales and Aerocopters would be aggregated with the existing cargo parcels south of the center of the Airport's east side)
- Consolidated corporate use on parcels between the existing small GA areas and the cargo designated parcels
- Small GA use at the far ends of the east side of the Airport and adjacent (to the north) to the Museum of Flight
- Relocation of the Airport Shop and redesignation as clear zone of a section of the Great Western Soils parcel adjacent to the current Shop site to improve the runway protection zone at the north end of the Airport

### **Issues**

The consultant proposed conceptual development plan raised a number of issues for the Roundtable, as follows:

1. **Impacts of proposed runway shift.** The Roundtable discussed concerns about impacts to the Georgetown residential area of shifting the runway 800 feet to the north. The Roundtable also discussed whether or not the option to reduce the runway length to 9200

feet might provide an opportunity to restrict traffic at KCIA, thereby aiding in noise reduction.

Although there were strong feelings on the part of some Roundtable members that the best option would be to reduce the effective takeoff runway length to 9,200 feet by addressing the safety area but not extending pavement 800 feet to the north, it was determined that restrictions on use of the Airport for noise reasons must be proposed and studied through a FAR Part 161 Study before they can be implemented. For this reason, runway length reductions for solely this purpose were rejected. Other factors that support maintaining the current runway length of 10,000 feet while establishing a conforming safety area at the south end of the long runway were: 1) the Boeing Company needs 10,000 feet of runway length for takeoffs when performing certain new model aircraft certification tests, and the Boeing Company would incur millions of dollars in costs, and the region would absorb thousands of jobs lost, if the Boeing Company no longer had a functional runway at KCIA; 2) other occasional users of the Airport also need the full 10,000 feet of runway now available at KCIA; 3) Impacts on Georgetown could be mitigated by limiting use of the extended portion of the runway to only the Boeing Company new model certification tests, and other operators could be required (if possible) or strongly encouraged to volunteer to begin their takeoffs to the south at the displaced threshold (current endpoint of the long runway).

**RECOMMENDATION:** The nonconforming safety area at the south end of the long runway should be addressed and a conforming safety area should be established; however, in so doing, the long runway takeoff length of 10,000 feet should be maintained by adding 800 feet of pavement, provided that the impact of using this shifted runway length is mitigated by limiting use of the northernmost 800 feet to takeoffs for certification testing or weather conditions and asking all other operators to use the current runway end for takeoffs to the south; and is further mitigated by construction of an acoustical wall at the north end of the Airport.

2. Cargo Operations. The Roundtable feels that the biggest community objection to KCIA operations is to noise impacts from a variety of air operations. Because they typically occur at dinner time and during pre-wakening hours in the early morning, cargo flights (particularly those in the early morning) generate the most complaints. Projected growth in cargo operations is of concern to many community residents and has been the subject of most community meetings at which airport issues are discussed.

The Roundtable discussed options for displacing cargo operations at KCIA and moving them to Paine Field or Sea-Tac Airport. Representatives of the cargo companies explained that Sea-Tac cannot accommodate new cargo company operations at this time and the cost of serving the greater Seattle area from Paine Field is prohibitive in terms of both time lost and additional cost of truck operations.

The Roundtable also discussed the possibility of restricting cargo operations to daytime hours. Representatives of the cargo companies explained that because of hub connections, the nighttime flights are critical to being able to provide overnight package delivery services to meet public expectations in this region.

There was not consensus on the following recommendation. Several of the community representatives on the Roundtable felt that cargo operations should be restricted by limiting Airport leases to non-cargo businesses and/or that a FAR Part 161 study to close the Airport at night should be undertaken with the intent of eliminating cargo night flights. In addition, several community representatives did not want to approve the consultant proposed land uses until it was known where the noise containment facility referenced below (see Georgetown Impacts section) would be located.

**RECOMMENDATIONS:**

- **24-hour per day service at KCIA should be continued.**
- **The consultant's recommended land use allocations, which generally parallel current uses, should be accepted.**
- **Noise from all types of existing operations as well as future operations should be addressed in a FAR Part 150 Noise Remedies and Land Use Compatibility Study.**

3. *Impacts on Georgetown.* Among residential neighborhoods, the Georgetown residential area receives the greatest share of impacts from KCIA. These impacts are from a range of activities, including takeoffs and landings and ground operations, including testing being performed on aircraft. Georgetown is concerned about low frequency vibrations and night noise impacts, in particular, and also about emissions from air and ground operations. The following recommendations were made by consensus:

**RECOMMENDATIONS:**

- **Construct an acoustical wall at the north end of the Airport to reduce noise from Airport operations.**
- **Construct a noise containment facility ("hush house")**
- **While moving the fuel tanks to comply with safety area requirements, also move the tanks away from the Georgetown residential area.**
- **Include strategies to address low frequency vibrations in addition to noise in the Part 150 study.**
- **Proceed with the budgeted air quality study and evaluate its recommendations.**

In addition, the following recommendation was made by majority vote.

- **Mitigate the runway shift, if it is approved, by limiting use of the northernmost 800 feet to takeoffs for certification testing or weather conditions and asking all other operators to use the current runway end for takeoffs to the south**

4. Part 150 Study. A variety of measures were discussed and recommended for the FAR Part 150 Noise Remedies and Land Use Compatibility Study. There was consensus to study all of the strategies listed below and others which remain to be identified in the public scoping process. The Roundtable recognizes that not all of these strategies can or will be implemented but expects that consideration in the Study will lead to the most comprehensive remedies possible.

**RECOMMENDATION:** The Part 150 Study should consider and analyze a variety of remedies, including but not limited to the following. The Study should not result in just moving the problem and all aspects of the study should be communicated in plain-speak so that they are easily understood by the general public.

- Incentives for operators that are less noisy and use modern technology and for those that restrict night operations
  - Pilot training for carriers with scheduled night flights to use quieter flying techniques
  - Caps on the accepted noise impacts
  - Flight path changes and noise abatement procedures such as flying over the industrial area in the Kent Valley before turning when departing to the south, an over water approach from the north, minimizing reverse thrust cut-backs, delaying final flap landing configuration, and higher angles of arrival and departure
  - Combined Sea-Tac and KCIA traffic control
  - Installation and use of the earliest possible GPS system to be used by all aircraft flying IFR
  - Noise abatement power settings to be used during takeoff
  - Strategies to address low frequency vibrations in addition to noise
  - Requirement that all operators, even those aircraft below 75,000 pounds, be Stage III
  - Strategies to address single event impacts and not just averaged events that create conventional contours
  - Strategies to address cumulative impacts accruing to those residing below both Sea-Tac and KCIA traffic
  - Economic reparations for residents outside the 65 dnl contour who are significantly impacted by KCIA noise events
  - Other facility (acoustical) remedies to protect surrounding communities should be explored
5. Leasing. Several Airport tenants requested that the Roundtable recommend that the leasing moratorium be rescinded. Their arguments were that the planning process has been complex and delayed for a variety of reasons, which has resulted in some tenants being unable to do appropriate business planning. Some Roundtable members believe that it is inappropriate to resume leasing on the Airport until the Plan has been completed and can serve as a policy guide for Airport management; what is appropriate for long term leases is not yet certain. Others stated that because the options for Airport development

are now so narrow, as a result of the safety area issues, and because of the length of time the Plan has taken, leasing authority could be resumed, contingent upon following the conceptual development plan approved by the Council; this would assure the Council was aware of the types of leases likely to be proposed. It was also noted that the Council must approve all long-term leases. The following recommendation received a majority vote but not consensus.

**RECOMMENDATION:** The moratorium on new and extended long-term leases which was instituted pursuant to Motion 9709 should be rescinded.

6. Other Issues. The Roundtable recognizes that the final Airport Master Plan will contain many other types of policies to guide the Airport which have not been addressed yet by the Roundtable or Airport management. However, the following policy recommendation is one example which was discussed and which received consensus.

**RECOMMENDATION:** The Airport should put an environmental management system in place if there is not already one and require environmental/soil testing when tenants change. In addition, the Airport should encourage its tenants to work with local government agencies to reduce and substitute for hazardous materials where possible.





**KING COUNTY INTERNATIONAL AIRPORT  
ROUNDTABLE**

**Minority Report  
Submitted by Community Representatives  
to  
King County Executive and King County Council**

**Re:  
King County International Airport Master Plan**

**May 1998**

## **INTRODUCTION**

We, the undersigned, are not in agreement with some of the positions of the majority of the KCIA Roundtable on a number of issues and wish, by submittal of this minority report, to speak to those issues and clarify our positions.

The background of our concerns stem from two distinct perspectives: (1) balance of quality of life in Seattle vs. inappropriate airport growth; and (2) the very real health and safety concerns both at KCIA and in the neighborhoods. The fastest growing neighborhoods are in those around KCIA; West Seattle, Beacon Hill, and the Rainier Valley in Seattle and Tukwila, as well as unincorporated areas of King County and the Kent Valley. These neighborhoods have more developable land available than most others, and are the ones most heavily impacted by the KCIA's operations. As the population density increases, even more people will be impacted by the noise and related health issues. Many of the neighborhoods provide much needed low income housing, not just because of the airport's presence, and have a tremendously valuable ethnic diversity that we must preserve, even when people cannot speak for themselves. It is imperative that these issues be addressed now in this planning process rather than later, and that KCIA realize that it alone cannot meet the increasing demand for airport space, and should allow its constraints to be based as heavily on the needs of its neighbors, as it is on its land use capability.

We also have additional concerns and requests that may not fit into the recommendation itself, but nonetheless need to be addressed at this time as part of the process.

Our three main positions are as follows and will be explained in this document:

1. Declaring a 9200 feet airstrip.
2. Support of King County Council's CTED Committee's motion #9709 to continue a moratorium on any new leases until after the FAR Part 150 and 161 studies have been completed and a final Master Plan has been adopted.
3. Aggressively completing and implementing FAR Part 150 and 161 studies to restrict noisy larger jets and limit nighttime operations.

We would also like to present a community developed Community Alternative, Revision II, as another viable conceptual plan to put before an EIS and take forward as a viable option as a preferred Master Plan. Its main features are a 9200 feet runway, reduction of larger, noisier low-flying jet operations over Seattle neighborhoods, permanent air quality, noise and vibration monitoring, and a noise reduction menu.

### **THREE POSITIONS**

#### **1. Declaring a 9200 feet airstrip.**

There are two viable solutions to correcting the Southend Safety Zone violations. One would be to declare the runway to be 9200 feet. The other would be the northern 800 foot extension. The FAA is not requiring the extension or maintenance of the 10,000 feet runway. Of the Airport operators, only Boeing has stated a need (vs. want) of the extension to accommodate 3% of their total operations, which would be approximately .05% of the total operation at KCIA. This hardly appears to justify the cost of \$3-5 million. The FAA has not, to date, stated publicly that this level of need meets their requirements for financial assistance. Would King County be willing to pay the tab for it?

The extension would also bring the larger, heavier jets' vibrations another 800 feet closer to the Georgetown Powerplant Museum, potentially threatening its stability. The Powerplant is one of only two landside National Historic Landmarks in Seattle and must be protected. We have been told that there is a separate EIS that must be conducted when a Landmark is potentially threaten. The FAA, in the November 21, 1997, Master Plan Review Letter is recommending that, if the extension goes forward, the Powerplant would need to be removed.

There also remains the confusion of the consultants' statement that there are buildings north of airport property that would need to be purchased and destroyed when for sale to meet other FAA height limitations in a "protection zone" or "clear zone". These buildings include at least one low-income apartment building, a number of homes, businesses and the Historic Georgetown City Hall building.

#### **2. Support King County Council's CTED Committee's motion # 9709 to continue a moratorium on any new leases until after the FAR Part 150 and 161 studies have been completed and a final Master Plan has been adopted.**

Lifting the moratorium on leases will lock in land use and immediately create a de facto Master Plan. This may render meaningless further study of alternatives, further deliberation about the Master Plan, the results of the EIS, and any possibility of implementing the recommendations of the FAR Part 150 and 161 studies.

Although we understand fully UPS's business and growth interests in getting a lease that would prevent them from having to seek other accommodations, lifting the moratorium will also allow them to immediately expand, leaving the citizens of King County concerned with the noise and environmental effects of noisier, bigger jets (air

cargo) powerless to effectuate change. The due process protections of the Master Plan process and EIS process will be undermined by ending the moratorium.

KCIA has provided us with a Schedule (1997) of Operators, their fleets, schedules and approach noise levels measured at approximately 1 mile from the airport (included in the Appendix). Although UPS reminds us that they have upgraded their fleets for noise reduction, their noise levels are equal to and sometimes even greater than other operators' fleets. To add significance to this fact, we note that they have by far the greatest volume of nighttime operations.

3. **Aggressively pursue, complete and implement FAR Part 150 and 161 studies to perform noise evaluations and to restrict nighttime and other excessive noise impacts.**

It is *not* our intent to limit our focus to one group, such as cargo, nor to single them out, nor is it our intent to close the airport at night, but to actually address all users of the larger, noisier aircraft with the lower, more penetrating and disturbing noise frequency levels Whenever they occur. We understand that there will need to be some exceptions made relative to Boeing's operational needs.

The gravity of the noise levels linked to KCIA operations at night have been well documented by 87% of the noise hotline complaints being nighttime air cargo flights, while these flights comprise only 6% of the total KCIA operations. While air cargo, the major nighttime operators, state that SeaTac can't accommodate their business, it is estimated that KCIA carries only 10% of the cargo volume of SeaTac. SeaTac experiences approximately 6% increase in cargo per year, so it appears that they could absorb the KCIA cargo business within approximately three years.

Although the noise hotline complaints have been predominately related to nighttime noise, we also request that the FAR Part 150 and 161 study daytime noise levels generated by the larger noisier low-flying jets that account for the remainder of the complaints which are also impacting the residents, businesses and employees predominately in Georgetown. Any noise insulation or mitigation measures should also include the business sector.

We would also request an emphasis on single event noise level impacts over the usual annual 'averaged out' noise level models to more accurately convey the impact of these noise assaults.

There are a number of residents in Georgetown that have suspended customary repairs and expenditures, like new roofs, to their homes pending these study results. A reassurance is needed that they won't need to continue fearing being bought out at less than market value in the near future. This policy in the short term may not effect

the character of the neighborhood, but could, over a longer period of time, result in the deterioration of a stable neighborhood.

### **OTHER CONCERNS**

1. The FAA Review comments of November 21, 1997 (document included), requests an evaluation of the "... mixing of small and large aircraft operations as several potentially hazardous situations presently exist on the airport ...." To date, we do not believe these conditions have been evaluated and remedied to the FAA's satisfaction. The one proposal to shorten 13L/31R by 200 feet has not been determined adequate as it still allows the present conditions of aircraft flying over other taxiing aircraft. We are very concerned about putting forth a consultant's proposal, which has not satisfied a FAA request for evaluation.
2. The screening wall and plantings proposed by the consultants, by their own admission, will not help noise reduction due to its distance from the airplanes themselves.
3. We request that viable noise mitigation measures be proposed for Beacon Hill, Tukwila and West Seattle, in addition to insulation programs which do not aid disturbances experienced while outside.
4. Although the flight path over Magnolia and Queen Anne may/will be shifted over Elliot Bay to achieve noise reduction in those neighborhoods, it increases the potential for noise at Alki. We are not comfortable pitting one neighborhood against another by shifting flight paths that may significantly increase the noise levels in another neighborhood. We believe the only real solution to equitable noise reduction is not to shift its source to other neighborhoods, but to restrict the types of aircraft that cause such high levels of complaints.
5. We would request that the FAA further evaluate and/or require other flight path designations and institute tightly controlled corridors:
  - To raise the KCIA airspace to increase the distance between the low flying planes and homes/businesses.
  - To regulate all flights paths over Seattle to Industrial zones, eliminating free VFR flying over Seattle. For example, using the I-90 corridor for East-West access instead of Beacon Hill and by required use of the East Marginal Way corridor

instead of the Vashon Departure or West Seattle reservoir approach, moving more small aircraft away from homes in the West Seattle neighborhoods; and

- Flights over Georgetown should be required to fly over the railyard instead of flying directly over the home.
6. That King County/KCIA establish broader mitigation and noise reduction measure than the minimum established and paid for by the FAA and commit to providing adequate funds for implementation of those measures.
  7. That King County will familiarize itself with the WAC 173-60-050(d) requiring that engine run-ups be done at remote sites whenever possible, and the FAR Part 161 regulations that permit these restrictions without the need of a full study.
  8. That safeguards be included in the Master Plan to assure that projected levels of growth will not be exceeded by any statistically significant amount. KCIA cannot meet all future demand, and should reduce it's level of expectation of meeting demand based on it's constraints of being in the heart of a city.
  9. That a City of Seattle, City of Tukwila and King County Joint Airport Affairs Committee be commissioned to allow a forum for discussing and resolving joint concerns. The impacts of KCIA affect the residents of these two cities more directly than other King County residents, and we believe that our City governments should be involved in partnering with King County to provide government level policies and direction with respect to the airport's impact on their citizens. Our concerns are often different than those addressed from an operational perspective.
  10. That King County Council reviews the Department of Ecology letter of November 14, 1997 (enclosed), referencing numerous environmental concerns. Although a few of the comments are no longer applicable due to an elimination of all but one of the original alternatives, the vast majority of the document addresses timely concerns of :
    - . . . Since KCIA is located in a highly urbanized diverse area the elements of being a good neighbor need to be more fully described.
    - . . . The Master Plan proposal as having direct, indirect and cumulative impacts of air pollution and traffic sufficient to be considered adverse impacts . . . .
    - . . . A cumulative effects analysis, which addresses area-wide community and environmental impacts, needs to be included. King County needs to carefully consider the range of probable impacts including short-term and long-term effects of noise, vibration, air pollution, traffic and contaminated sites . . . .
    - . . . The concept document is heavily weighted toward economic considerations. The document must also ensure that environmental values and amenities are given the necessary and appropriate considerations . . . .

11. That an exhaustive study of the health effects of KCLIA operations on residents and workers in impacted neighborhoods relative to aircraft engine exhaust and unburned fuel analysis be completed and protective measures for the populace be instituted.
12. That the \$200,000 KCLIA allocated for an air quality analysis include extensive air quality samples rather than predominately screening modeling studies.
13. Since the airport has a surplus of \$7 million, nearly a year's budget, and approximately 90% of their annual budget comes from leases and fuel flowage, we would assert that the airport could reduce the number of operations without negatively affecting their bottom line. The current landing fees and tonnage fees are well below market values and, if adjusted to that level, could provide additional funds.
14. We note that the current Alternative 4 cargo levels are projected to be 29,400 by 2015, which is 1,600 operations more than Alternative 2-AirCargo Emphasis (27,800) which was ruled out as a non-viable alternative. An increase in the projected numbers of air cargo are not seen as an acceptable scenario.

#### **IN SUMMARY**

- One 747 arriving and departing . . . produces as much smog as a car driven over 5,600 miles and as much polluting nitrogen oxides as a car driven nearly 26,500 mile . . . . (Flying Off Course, 1996)
- Aircraft emissions fan over twelve miles on approach and a more concentrated six miles at departure. (U.S. Department of Commerce, Environmental Science Services Administration Weather Bureau Technical Memorandum WE-58)

We are committed to maintaining the quality of life we have had the privilege of experiencing, living in Seattle and King County. As we look not just 20 years into the future, but 50 or 75 years, it seems imperative that while at this juncture in the road, we stop and ask ourselves, "Where is the balance between economic vitality and a healthful, soul-sustaining quality of life?" At what point do we stop the unabated "bigger is better" growth phenomenon and look to our future and the environmental, social, and human impacts of our decisions? Bigger isn't better anymore. Our children and children's children need to be able to look back at our choices and not wonder, "What were they thinking?," but know that we made choices that have positively benefited their quality of life.

To this end, we, the communities around KCIA, are recommending another and more fully comprehensive evaluation of the options.

We trust that our governing body of King County will have as much concern for positively shaping our future as we do.

Respectively submitted,

*Lynn Tucker*, Beaumont/Rainier Valley

*Charlie Cuniff* (DISSENT ON #1)  
CHARLIE CUNIFF

*Randy Eatherton*

Randy Eatherton Georgetown Crime Prevention and Community Council

*Magnolia Community Council*  
*Daniel & Daugherty*

The Tukwila City Council does not support the consultants' recommendations for the Land Use plan, meaning no expand acreage for cargo. However, they did support the 10,000 foot runway, the 24 hour access and the ending of the moratorium on leases. Rosemary Unterker, Tukwila



**King County International Airport - Boeing Field**  
**FAA Review Comments - Airport Master Plan**  
November 21, 1997

**Cargo vs. GA / Large vs. Small Aircraft**

On the east side of the airport the analysis has centered upon land use designations for areas to serve air cargo vs general aviation. Building heights needed to serve the larger air cargo aircraft were considered and appropriate areas were designated. It may also be worthwhile to evaluate the impact of mixing large and small aircraft operations regardless of the aircraft's purpose. Several potentially hazardous situations presently exist on the airport which should be investigated further and corrected if warranted.

**Taxiway A-9 and the location of the landing threshold for Runway 13L**

Large aircraft (B-757/767) are presently being regularly used for air cargo operations on the east side of the airport. When these aircraft are holding to cross the long runway at Taxiway A-9 their tails stick up as much as 53 feet penetrating the approach surface to Runway 31R. Please insure that the FAA threshold siting requirements are met on both ends of this runway. As smaller aircraft are operate to Runway 31R/13L, they often overfly one or more of the aircraft taxing or holding. Many of the pilots of the smaller aircraft are student pilots and avoiding overflight is at times awkward if not impossible. The tower controller often notifies landing pilots about the large aircraft on the taxiway and advises them to fly the VASI but these operations could become a major issue if the number of large aircraft on the east side are allowed to increase.

**Taxiway Weight Restrictions**

Another restriction placed on the movement of large aircraft on the east side of the airfield are weight restrictions on certain pavement sections of Taxiway A. These pavement restrictions should be considered when identifying the siting of operation areas for large aircraft.

**Approach End Runway 31L**

**Runway Safety Area/Object Free Area**

Runway 31L has a non-standard Runway Safety Area (RSA) due to the existence of a fence and road (Airport Way) which is located just east of the runway. The RSA should extend 250' on each side of the Runway Centerline and extend 1,000' south from the runway end.

However, it appears that the 250' dimension can only be maintained for approximately 200' beyond the runway end. The Runway Object Free Area (OFA), which includes an even larger area, is also penetrated by the fence, road, and an adjacent railroad. There are

The residents of Georgetown bordering the northwest side of the airfield have been actively opposing airport expansion due to noise and air quality impacts. The development of the northwest area as an aircraft operations area may have adverse impacts on property beyond the airport's present boundary. these impacts should be assessed fully prior to any final decisions about the further development of that area. 7

**Steam Plant** - The Steam Plant is an obstruction and should be moved if possible.

#### **Fuel farm in the RPZ**

An additional issue surrounds the existence of a Fuel Farm in the Runway Protection Zone (RPZ) at the approach end of Runway 13R. FAA airport design standards specifically prohibits this type of use within this area. we understand that the fuel tanks are below ground. Please address the mitigation of this non-standard land use within the RPZ. 7

#### **RPZ - Runway 13L**

Rotary wing - Pad 1 appears to be located beneath the approach slope to Runway 13L. This may be a potentially hazardous situation. Our drawings do not indicate its exact location. The tower reports that this situation should be analyzed to insure safety. There have also been discussions about the other rotary wing pads on the east side of the airport. Further study may determine that one or more of the pads should be closed or eliminated. 7



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

November 14, 1997

Ms. Cynthia Stewart  
King County International Airport  
7233 Perimeter Road South  
Seattle, Washington 98108

**Subject:** Review of the "Recommended Development Plan Working Paper and the Development of Alternatives Technical Paper" for the King County International Airport/Boeing Field Masterplan Development.

Dear Ms. Stewart:

Thank you for extending your original comment period and allowing us the opportunity to comment on the "Development of Alternatives Technical Paper". This document describes and analyzes the alternatives to be considered for the King County International Airport/Boeing Field (KCIA) Masterplan Development.

**SEPA Process**

It is Ecology's understanding that this is a concept document and that King County has not made a Threshold Determination at this time per the State Environmental Policy Act (SEPA). The KCIA should evaluate whether this document qualifies as a proposal under SEPA (WAC 197-11-055 (2)(a)) and one that meets the definition of an action (WAC 197-11-704 (1)(a)). SEPA encourages review at the conceptual stage and early integration with agency activities. SEPA further provides that for public proposals, lead agencies may extend the time limits prescribed in the rules. Therefore, King County has a great deal of flexibility with regard to the preliminary documents needed for an environmental impacts review.

Based upon our review of this document, we see the Masterplan proposal as having direct, indirect, and cumulative impacts of noise, air pollution, and traffic sufficient to be considered significant adverse impacts. These impacts need to be fully analyzed and we would recommend that a formal threshold decision be made at this time. We would further recommend that this document be used as part of a "pre-scoping" process that is integrated into an expanded scoping under SEPA (WAC 197-11-410).

In assessing the significance of an impact, KCIA should not limit consideration of the proposal to only those aspects within the airport boundaries. A cumulative effects analysis, which addresses area wide community and environmental impacts, needs to be included.



Ms. Cynthia Stewart

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King County needs to carefully consider the range of probable impacts, including short-term and long-term effects of noise, vibration, air pollution, traffic, and contaminated site identification and cleanups. The impacts analysis should include those that currently exist and are likely to arise or exist in the future. This is particularly important with the current use of Boeing Field as both a flight test operations base for new aircraft development and design, and as a delivery base for new aircraft where customer acceptance testing and systems check out operations are conducted.

### **Mission Goals and Assumptions**

The Mission statement and goals correctly identify the need for KCIA to address its impacts to the community. Since KCIA is located in a highly urbanized diverse area the elements of being a "good neighbor" need to be more fully described.

The assumptions used to evaluate the final set of six alternatives would be more comprehensive if an additional one were added. A sixth assumption should include constraints based upon the elements of being a "good neighbor" as identified in the Mission and goals section of the document. We would encourage KCIA to delete the word "maximize" in the last line of Assumption 3. The criteria provided by this assumption as it is currently written limits the range of reasonable alternatives that could be analyzed. We would recommend grouping all of the assumptions together. The third, fourth and fifth assumptions found on page 13 and 14 need to follow the first two assumptions located on page 3.

### **Alternatives**

The concept document is heavily weighted towards economic considerations. The document must also ensure that environmental values and amenities are given the necessary and appropriate consideration. Maximizing airport specific operations in separate alternatives is too narrow a focus. The document could provide for a broader range of reasonable alternatives.

The alternatives currently identified in the document need to be modified to account for the impacts of noise, vibration, air pollution, traffic, contaminated site identification and cleanups, and the cumulative impacts of noise and air pollution on the community.

We would suggest that Alternative 4 be re-titled as "mixed used" as a descriptor of the alternative.

Based upon our review of this concept document, additional information would be helpful in better understanding the effects of future impacts of the Airport's operational forecasts. This would include noise, vibration, source control of hazardous or dangerous waste, and air quality study and evaluation.

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We recommend that KCIA invite affected agencies to be included in a working group as a part of the EIS/Master plan development process.

### **Contamination/Cleanup Issues**

A review of the contamination and cleanup issues in the two documents reviewed resulted in the following comments:

#### Recommended Development Plan Working Paper

Page A.5, first bullet - There may be some volatile organic compound (VOC) contamination at the Boeing facility that will need to be addressed. This should be considered during any re-development plans in this area.

#### Development of Alternatives Technical Paper

Page 63, Section 11.4.3, paragraph 1 - See comment on Appendix F, page 2.

Appendix F, page 2, paragraph 1 - The following sites at the Airport have reported contamination to the Department of Ecology:

- Boeing Site Development, Bldg. 3-801, N. Boeing Field
- Boeing Fuel Test Lab, Bldg. 3-333, N. Boeing Field
- King County Airport (Firestone Bldg. Demolition), 9220 E. Marginal Way
- King County Airport, 6518 Ellis Ave. S.
- King County Airport, 7300 E. Marginal Way S.
- North Boeing Field Bldg. 3-354, Ellis Ave. and E. Marginal Way
- Boeing/N. Boeing Field Bldg. 3-840, Ellis Ave. and E. Marginal Way
- Flightcraft/Boeing Field/King County, Bldg. 8201
- North Boeing Field Fire Training Facility, King County Airport
- N. Boeing Field/Main Fuel Farm/3-818, SE of Bldg. 3-818
- Boeing Fuel Test Lab (Bldg 3-333), N. Boeing Field
- American Avionics/Boeing Field, 7031 Perimeter Road South

There may be other contaminated sites that have not reported their contamination to us.

Appendix F, page 2; paragraph 2 - Regarding the assumption that groundwater is contaminated only if the suspected source of contamination was documented to be at, or below, groundwater levels. This is not necessarily the case, in all situations and for all contaminants. Chlorinated solvents are heavier than water, therefore they can migrate, via gravity and low permeability zones, down through the vadose zone and enter the groundwater, even if the source soils are well above the water table. This can also be the case with the heavier PAHs, especially if in product form.

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Please add chlorinated solvents to the list of contaminants expected to be encountered. Chlorinated solvents are often found as common contaminants at airports. They are often used as degreasing agents in automotive and aviation maintenance and aircraft manufacturing. Also, please add metals, often co-contaminants of petroleum products that have been in contact with engine and machinery parts. Also, between the Georgetown Steam Plant and the Boeing property line, there could be an exceedence of the Model Toxics Control Act (MTCA) polychlorinated biphenyl (PCB) cleanup standard, as evidenced by an excavation sidewall sample taken in this area. The Georgetown Plant conducted a PCB cleanup, up to the property line of Boeing.

Appendix F, page 3, all alternatives listed - Regardless of whether or not existing contamination will be unearthed during excavation, it is prudent to assess the condition of probable contaminated areas that will not be excavated. This is necessary to see if other remedial measures will be necessary in these areas, for protection of groundwater and surficial soil contact (human health issues). This is the process required under the MTCA to protect human health and the environment.

Appendix F, page 3, paragraph 3 - The above comment applies, and is relevant to, cost estimates.

Appendix F, page 3, paragraph 5 - A good rule of thumb in the remediation industry is to assume that, whatever volume of contaminated soils that you think that you have, double it, and you are probably close to reality. Cost estimates need to be revised based on the addition of the contaminants chlorinated solvents, metals and PCBs.

Appendix F, page 5, paragraph 3 - Again, a contingency cost estimate needs to be established for sites that will require remediation, other than in excavated areas.

Appendix F, page 5, paragraph 5 - Please revise this section based on the addition of other contaminants, which will change the disposal cost estimates.

Appendix F, page 6, item #8 - We know of no way to correlate site characterization costs to cleanup costs.

Appendix F, page 6, item #11 - Please see earlier comment on complete site assessment to determine if a threat to human health and the environment exists, by determining which contaminants are present and if pathways for exposure exist, potential for migration to groundwater, etc. Contaminated soils, adjacent to utility corridor placement and not remediated, could enter those corridors. Utility corridors can act as preferential pathways for the further migration of contaminants.

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Appendix F, Tables 1 through 7 - See comments, page 2.

If you have any questions, please call Gail Colburn with our Toxic Cleanup Program at (425)649-7058.

#### **Air Quality Issues**

As addressed in meetings with Ecology and the Puget Sound Air Pollution Control Agency, there needs to be a current baseline air quality assessment made, followed by a determination of the changes to the current situation caused by each alternative. This should be accomplished through a combination of modeling and air quality measurements.

The impacts of the proposed alternatives on air quality from aircraft operations and associated landside activities need to be addressed as part of the preferred alternative selection process. If you have any questions, please call Doug Brown with our Air Program at (425)649-7082.

#### **Water Quality Issues**

A review of the water quality issues resulted in the following comments:

De-icing facilities will require dedicated collection and treatment system which will prevent de-icing agents from contaminating stormwater. Discharges of de-icing wastewater into sanitary sewer will need to be permitted by King County's Industrial Waste Division of King County's Department of Natural Resources.

All projects or expansion disturbing five or more acres of soil will require coverage under the General Stormwater Permit for Construction Activity. The threshold of five acres will be lowered to one acre or more effective sometime in 1998, corresponding to the changes in EPA's proposed stormwater regulations which are scheduled to be published November 25, 1997.

If you have any questions on the above, please call Kevin Fitzpatrick with our Water Quality Program at (425)649-7037 or Lisa Zinner, also with our Water Quality Program at (425) 649-7276.

#### **Noise Issues**

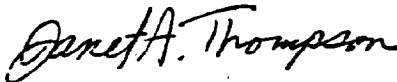
Noise is a significant environmental issue that needs to be better addressed during the planning and environmental review process. The regulations regarding noise are found in WAC 173-60, Maximum Environmental Noise Levels. We note that the maximum noise, between the hours of 10:00 pm and 7:00 am, is limited to 50dBA at a Class A receptor (residential areas) from a Class C (industrial) source. Limits may be exceeded for short periods as specified.

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"Sounds created by aircraft engine testing and maintenance not related to flight operations is exempted from maximum noise levels between the hours of 7:00 am and 10:00 pm, *provided*, that aircraft testing and maintenance shall be conducted at remote sites whenever possible." KCIA is, we know, very much aware that the Airport can not be considered a remote site. The airport, users, and Boeing must comply with the noise regulations during the non-exempted hours. Boeing has their voluntary engine testing curfew hours, but must still comply with the state (and local) regulation on noise limits when they do test. This can be enforced by the airport, King County, or the City of Seattle. Ecology is the enforcer of last resort. The penalty for violations is minuscule (Not to exceed \$100 imposed by local government, RCW 70.107, Noise Control). Chapter 173-60 WAC does not regulate noise associated with aircraft flight operations. We would first recommend that King county/KCIA determine noise levels in the Georgetown and South Park residential areas and assess the level of compliance. Second, we would recommend the develop a community noise abatement plan to ensure no violations and minimize noise levels through discussions with all involved agencies and Boeing.

Once again, thank you for giving us the opportunity to comment. If you have any questions regarding our comments or if I can be assistance in helping navigate through the SEPA process, please call me at (425)649-7128.

Sincerely,



Janet A. Thompson  
Senior Environmental Planner

JAT:jat:tm

cc: Gail Colburn, NWRO  
Kevin Fitzpatrick, NWRO  
Doug Brown, NWRO  
Mike Rundlett, NWRO  
Representative Velma Veloria  
NWRO File



# SCHEDULED OPERATORS: THEIR FLEETS & SCHEDULES

OPERATOR	FLEET EQUIPMENT (1)	NOISE LEVELS APPROX / TO (2)	NIGHT-TIME ARRIVAL SCHEDULE	NIGHT-TIME DEPARTURE SCHEDULE
AEROFLIGHT	C-402 PA34T	74.0 / 68.0 72.0 / 64.0	MONDAY-FRIDAY 2130 pm 2230 pm 2300 pm 2400 pm	MONDAY-FRIDAY 0215 am 0345 am 0345 am
AIRBORNE (3) EXPRESS	DC-8 DC-9	88.6-88.8 / 84.1-85.6 89.1-96.0 / 78.6-88.4	MONDAY-FRIDAY 0500 am 0504 am 0554 am	MONDAY-FRIDAY 1930 pm 1950 pm 1950 pm
AIRPAC	PIPER SENECA	N/A	MONDAY-FRIDAY 2400 pm	MONDAY-FRIDAY 0430 am
ALASKA AIRLINES (4)	737-200	85.8-92.1 / 82.4-88.0	MONDAY-FRIDAY 0252 am	MONDAY-FRIDAY 0335 AM
AMERIFLIGHT	LR35 METRO BE-99 BE-1900 CHIEFTAIN	81.6-83.1 / 65.1-71.6 76.0-78.5 / 69.2-71.0 74.0 / 66.0 77.0 / 66.5 N/A	MON 2400 pm TUE - FRI 0415 am 0515 am 0600 am	MON 0015 am 0615 am TUE-FRI 0015 am 0600 am 0630 am
BURLINGTON AIR EXPRESS (5)	DC-8 CONVAIR	88.6-88.8 / 84.1-85.6 N/A	SUN LAYOVER MON LAYOVER TUE 6:14 am WED 6:14 am THU 6:14 am FRI 6:14 am SAT 7:14 am	LAYOVER 18:50 pm 18:50 pm 18:50 pm 18:50 pm 19:37 pm LAYOVER
METHOW AVIATION	B-18	75.0 / 69.6	SUN - THUR 2330	NO SCHEDULED NIGHT DEPARTURES
UPS (3)	757 DC-8 727 747	84.9-90.5 / 67.6-76.1 88.6-88.8 / 84.1-85.6 86.1-96.0 / 82.4-92.6 92.8-97.8 / 94.1-100.5	MON - FRI 0326 am 0431 am 0435 am 0440 am SAT 0207 am 0430 am 0530 am 0603 am	MON - FRI 0510 am 0520 am SAT 0250 am 0420 am 0448 am

## NOTES:

- (1) Fleet in use at BFI varies; equipment listed appears to be typical.
- (2) Landing / Takeoff noise in decibels (a-Weighted) as reported in FAA Advisory Circular 36-3f dated 8/10/90.
- (3) Airline - Stage III equipment.
- (4) Airline - Stage II equipment.
- (5) Not yet flying.

SOURCE: KCIA Administration

# **King County International Airport Master Plan Update**

## **Community Alternative**

May 1998

## COMMUNITY ALTERNATIVE PROPOSAL -- SUMMARY

ELEMENT	CURRENT STATUS	COMMUNITY ALTERNATIVE	NOTES
Cargo Service De-emphasized	10 acres leased + additional subleased	No new leases for Cargo. Phase out existing leases, pursuant to Part 161 results.	Page 3
Totally Enclosed Engine Run-up Facility (Hush House) with Air Scrubbers	None	Installation Completed in 3 years	Page 5
FAR Part 150, Noise Study	Planned	Planned- Fast Track	Page 6
FAR Part 161, Stage 3 nighttime restrictions (Aircraft >75,000 lbs)	No	Planned - Fast Track in parallel with FAR 150	Page 7
Proposed Runway Extension (800 ft)	No	No	Page 8
Revise Landing Fees	No (95% pay no fee)	Yes -everyone pays market price.	Page 9
Permanent Air Quality Monitoring System	No -Air quality study only	System installed in 2 years	Page 10
Enhanced Noise and Vibration Monitoring System	No - except some ANOMS capability	System enhanced in 2 years with updated technology	Page 11
Strong pilot educational program for noise reduction	No	Yes	Page 12
Support for Powerplant and Museum of Flight	No	Yes	Page 13
Passenger Service De-emphasized	Some	No new leases for Passenger service. Phase out existing leases pursuant to Part 161 results.	Page 14
Noise Reduction Menu	No	Yes	Page 16

# **Cargo Service De-emphasized**

- Potentially hazardous situation, related to mix of large and small aircraft, raises serious safety concerns. (Ref 1)
- In 1997, 87% of known sources of nighttime noise complaints were due to cargo operations, whereas cargo is only 6% of the total operations at KCIA. (Ref. 2)
- Cargo operators currently lease 10.5 acres from KCIA (8% of available space) and sub-lease additional acreage from other tenants. (Ref. 3)
- De-emphasis Cargo service by not issuing new leases for Cargo operators.
- Phase out current leases for Cargo operators using larger noisier jets, by not renewing them when they are due to expire, or at an earlier mutually agreeable time, pursuant to a Part 161 study. Provide incentives for current Cargo operator leases to be terminated early.
- Support KCIA position that new sub-leases are consistent with approved Master Plan.
- Reallocate property, as it becomes available, to a mix of operations such as GA, low noise corporate operations, aircraft sales and delivery facilities, aircraft maintenance facilities, and non operational aviation activities.
- KCIA analysis (Ref. 3) shows no economic benefit difference between original six alternatives, including phase out of cargo operations. Cargo service to region would be

transferred to other locations within region, without undue burden on interstate commerce.

Ref. 1: FAA comments to KCIA Master Plan, dated November 21, 1997

Ref. 2: KCIA Noise Report Summary for 1997

Ref. 3: KCIA Development of Alternatives Technical Paper, September 1997.

## **Totally Enclosed Engine Runup Facility (Hush House) with minimum 20 db Attenuation - Operational in 3 years.**

- Ground Engine Operations cause considerable disturbance to nearby communities. Operators do not attempt to attenuate noise or control air pollution. (Ref. 4)
- Technology exists for significantly greater than 20 db noise attenuation at a distance of 1 mile from the source, using a Hush House. (Ground Runup Enclosure in operation at Chicago's O'Hare Airport). (Ref. 5).
- Similar technology in use by Military and European airports.
- Location of Hush House to be determined; dependent on space and aircraft weight requirements. Minimizing community impact to be a major factor. (e.g. South West corner of airport)
- KCIA and Boeing to develop regulations on Hush House use; goal should be for 95% of all Ground Engine Operations to be conducted within the Hush House, with 100% between the hours of 5 pm and 8 am.

Ref. 4: Comments at KCIA Open House Feb 18, 1998; Comments to Master Plan dated Nov. 19, 1997.

Ref. 5: Landrum and Brown Report on the Chicago O'Hare International Airport Ground Runup Enclosure. March, 1997

## **Conduct a Noise Study in accordance with FAA Regulation Part 150 - start immediately, expedite process.**

- No Part 150 Study ever completed at KCIA. Limited elements conducted by consultant in 1993-4, but not approved by KCIA. (Ref. 6)
- General consensus that a Part 150 should be conducted; therefore initiate this process immediately using expedited methods.
- Analysis should include all communities impacted by noise from KCIA operations, beyond the 55 DNL contour.
- Results may not be available for months, and may impact certain Master Plan proposals.
- New leases should be not allowed until Master Plan is approved per KCC Motion 9709. (Ref. 7)
- All agreed-to noise abatement measures not impacting airport land use, or the Master Plan, should be implemented immediately.

Ref. 6: KCIA Noise Impact Assessment, Draft Report No. 292840, Dec 1994, prepared by Harris Miller, Miller & Hanson, Inc.

Ref. 7: King County Motion 9709 passed 13-0, November 20, 1995

## **Perform an FAA Part 161 Study for Stage 3 Nighttime Restrictions - start concurrent with Part 150, expedite process.**

- **FAA could fund Part 161 study.(Ref. 8)**
- **FAA allows Part 161 to be performed in parallel with Part 150. (Ref. 8)**
- **Part 161 should address restrictions for jet aircraft >75,000 lbs gross weight. (Ref. 8)**
- **Include effects of single event noise incidents to more accurately convey impact on communities.**
- **Communities are demanding nighttime restrictions to prevent unacceptable sleep disturbances, from large jet aircraft. (Ref. 9)**

Ref. 8: Airport Noise a Guide to FAA regulations, Cutler & Stanfield, Jan 1995, with 1996 addendum.

Ref. 9: Numerous Community meetings since 1995, Comments to Master Plan, dated Nov 19, 1997, Comments at KCIA Open House, February 18, 1998.



## **Plan to extend Main Runway not justified - Declare length as 9200 ft.**

- Runway design criteria stem from FAA Airport Design requirements published on September 29, 1989. Airport Runway Safety Area and other dimensions have been non-standard since 1989. (Ref. 10)
- FAA Land Policy requires Airports to declare runway lengths to meet new Safety Area requirements by January 1 1999. (Ref. 11)
- All the types of aircraft currently using KCIA can take off or land on 9200 ft. It has been estimated that fewer than 3% of Boeing operations and fewer than 0.05% of all KCIA operations may require more than 9200 ft, for take-off under specific gross weight and/or atmospheric conditions (e.g. high gross weight on a very hot day). Under such conditions, aircraft can take-off with reduced weight of fuel.
- Extension of runway to the north by 800 ft, would severely impact Georgetown and the Powerplant which is a National Landmark. There are existing Runway Protection Zone violations beyond the proposed north Safety Area.
- Extension of runway will encourage more operators with large heavy aircraft to use KCIA, interfering with noise reduction programs, and could cause economic losses in adjacent communities.

Ref. 10: FAA Airport Design, Advisory Circular AC. 150/5300-13 dated Sept. 29, 1989, with Changes 1-5.

Ref. 11: FAA Safety/Certification Policy 95-08 dated November 20, 1995, issued by NW Mountain Region, Airports Division

## **Revise Landing Fee Schedule - so that all users pay proportionately at market price**

- Current landing fees unchanged since 1977, and only 5% of users pay. (Ref. 3)
- Landing fees are \$0.35/1000 lbs compared to approximately \$1.40/1000 lbs at SeaTac. (Ref. 3)
- All landing fees should be at market rates and applied to all users. Revised fee schedule should be based on landing weight (similar to SeaTac), and provide revenues to decrease noise, environmental, and health related impacts.
- Current fee schedule results in revenues of \$200,000-\$300,000 per year. For example doubling the landing fees (to \$0.70 per 1000 lbs) and applying them to all users could net an estimated \$2,500,000 per year (based on 1997 operations)
- Fee schedule should be increased at night to discourage nighttime operations, if permitted by FAA agreements.

Ref. 3: Development of Alternatives Technical Paper, September 1997 ( Pg. 84-86).

# Permanent Air Quality Monitoring System

- Residents adjacent to KCIA report potentially toxic fuel odors associated with operations. (Ref. 13)
- Data from the Seattle-King County Health Department shows increased respiratory illness, in districts close to KCIA. (Ref. 14)
- The Agency for Toxic Substances and Disease Registry (ATSDR), has indicated a need to investigate this issue further. (Ref. 15)
- The County Council has allocated funds for conducting an Air Quality study in 1998. Study should include extensive air quality sampling, rather than predominantly screening modeling studies, and should emphasize the analysis of larger jets. (Ref. 16)
- There appears to be enough concern that a continuous monitoring of the area surrounding KCIA could be justified.
- A system of several monitors and a KCIA Air Pollution Hot Line would be required, that can provide time correlated data. Operational in 2 years.

Ref. 13 Georgetown Crime Prevention and Community Council, numerous letters 1996-1998

Ref. 14 Seattle King County Health dept. data, Hospitalization Rates for Georgetown, 1991-1995, letter to L. Dove dated March 12, 1998

Ref. 15 ATSDR letter to L. Dove, dated February 9, 1998

Ref. 16 KCIA budget for 1998

# **Install Enhanced Noise and Vibration Monitoring System**

- **Present System has 4 Permanent Noise Monitors close to KCIA, and 4 Portable Monitors for the remainder of the KCIA affected area. (Ref. 17)**
- **Additional Permanent Monitors are required to continuously monitor approach and departure patterns integrated with an Aircraft Noise and Operations Monitoring System (ANOMS).**
- **Residents within a mile of KCIA experience noticeable vibration from certain operations at KCIA. No vibration monitoring is currently being conducted around KCIA. (Ref. 18)**
- **A Vibration Monitoring System is required for continuous monitoring in areas adjacent to KCIA.**
- **New noise and vibration monitoring systems integrated and operational within 2 years.**

**Ref. 17 KCIA Ad Hoc Noise Committee minutes, dated February 2, 1998**

**Ref. 18 Georgetown Crime Prevention and Community Council, numerous letters dated 1997-1998.**

## **Strong Pilot/Operator Educational Program**

- **KCIA does not offer a regular quiet flying educational program for pilots or operators to attend.**
- **KCIA Noise Office may not be staffed adequately to provide such a service. (Ref. 19)**
- **Educational program, to be functional in 1 year.**
- **Operators should be required to attend periodic educational programs.**

**Ref. 19 Job description of KCIA Noise Officer, dated February 14, 1996.**

## **Support of Georgetown Powerplant and Museum of Flight.**

- The Georgetown Powerplant has been registered as one of two landside National Landmarks in King County, and is being developed into a unique museum. Physical integrity of the facility is likely to be impacted by the proposed 800 ft. runway extension. (Ref. 18)
- The Museum of Flight is a unique facility connected to KCIA, and is interested in the possibility of expansion
- Both these facilities are important assets to King County and their preservation and development should be supported by KCIA.
- KCIA to provide priority land use consideration for these facilities.

Ref. 20 Comments to KCIA Master Plan, dated November 19, 1997

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## **Passenger Service De-emphasized**

- Potentially hazardous situation, related to mix of large and small aircraft, raises serious safety concerns. (Ref. 1)
- Status Quo passenger service predicted to go from currently 2000 operations per year to 8700 operations per year. This would result in daily operations of larger noisier jets. (Ref. 3)
- Scheduled passenger services using large jets likely to cause noise complaints, especially if they occur at night.
- Passenger operators currently lease less than 1 acre (less than 1% of available space) (Ref. 3).
- De-emphasis Passenger service by not issuing new leases for passenger operators, Phase out current leases for Passenger operators by not renewing them when they are due to expire, or at an earlier mutually agreeable time, pursuant to a Part 161 study. Provide incentives for current Passenger operator leases to be terminated early.
- Support KCIA position that new sub-leases are consistent with approved Master Plan.
- Reallocate property, as it becomes available, to a mix of operations such as GA, low noise corporate operations, aircraft sales and delivery facilities, aircraft maintenance facilities, and non operational aviation activities.

- **Passenger service to region would be transferred to other locations within region, without undue burden on interstate commerce.**

**Ref. 3 Development of Alternatives Technical Paper, September 1997.**

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# Noise Reduction Program

The following are some proposed Master Plan noise reduction strategies that should be considered for implementation at KCIA. Where appropriate, consideration should include an economic, safety and health impact analysis for everyone affected (i.e. communities, operators, airport, etc.), by an independent consultant.

1. Proceed with a FAR Part 150 Noise Study, and repeat every 5 years.
2. Proceed with a FAR Part 161 study to restrict certain Stage III operations at night.
3. Negotiate with current operators for voluntary nighttime restrictions.
4. Declare main runway length to be 9200 ft as soon as possible and abandon plans for adding an 800 ft extension.
5. De-emphasize cargo service by phasing out leases to cargo operators that fly at night.
6. Revise new lease agreements to advocate quiet operations.
7. Promote an aggressive operator/pilot quiet flying educational program.
8. Adjust Landing Fee rates to be in line with market rates, and apply to all users.
9. Conduct an extended test (1 year minimum) of Noise Abatement Departure Profiles using FAA AC 91-53A procedures, and implement permanently if successful.
10. Work with FAA to implement flight track adjustments, that provide significant overall noise reduction.
11. Provide for restrictions on certain aircraft <75,000 lbs and helicopters, at night, except for emergency and life support operations.
12. Install a totally enclosed Hush House with air scrubbers for conducting ground engine operations. Procedures would require 95% of all ground engine operations and 100% of all nighttime ground engine operations to use the facility.
13. Install Noise and Air Quality permanent monitoring systems for use in gathering data for, and enforcing of, a noise reduction program and an air quality improvement program.
14. Offer home insulation program to those within broader boundaries than FAA specifications, without requiring avigation easements.

# Operations Forecast

	<i>Original Consultants Forecast (Ref 3)</i>	<i>KCIA Revised Conceptual Development Plan Forecast (Ref 21)</i>			<i>Community Alternative Forecast</i>
	<i>Unconstrained 2015</i>	<i>Current 1997</i>	<i>Unconstrained 2015</i>	<i>Constrained 2015</i>	<i>Constrained 2015</i>
<i>GA + Air Taxi</i>	498,600	340,125	480,851	458,700	456,500*
<i>Military</i>	3,000	2,243	3,000	3,000	3,000
<i>Air Cargo</i>	28,100	23,750	37,632	29,400	17,500**
<i>Aerospace</i>	5,500	2,950	5,500	5,500	5,500
<i>Passenger</i>	10,200	2,000	10,200	8,700	2,000
<i>Total</i>	545,500	371, 068	537,183	505,300	484,500

\* Assumes approximately 10 additional acres assigned to G/A, when Cargo and Passenger service leases are phased out, plus a 1% increase annually from 1997 to 2015.

\*\* Only aircraft <60,000 lbs, and based on no net increase from 1997 levels. (Ref. 21)

Ref. 3: KCIA Development of Alternatives Technical Paper, September 1997.

Ref. 21. KCIA Forecast Analysis, dated April 6, 1998

# References

- Ref. 1: FAA comments to KCIA Master Plan, dated November 21, 1997
- Ref. 2: KCIA Noise Report Summary for 1997
- Ref. 3: KCIA Development of Alternatives Technical Paper, September 1997.
- Ref. 4: Comments at KCIA Open House Feb 18, 1998; Comments to Master Plan dated Nov. 19, 1997.
- Ref. 5: Landrum and Brown Report on the Chicago O'Hare International Airport Ground Runup Enclosure. March, 1997
- Ref. 6: KCIA Noise Impact Assessment, Draft Report No. 292840, Dec 1994, prepared by Harris Miller, Miller & Hanson, Inc.
- Ref. 7: King County Motion 9709 passed 13-0, November 20, 1995
- Ref. 8: Airport Noise a Guide to FAA regulations, Cutler & Stanfield, Jan 1995, with 1996 addendum.
- Ref. 9: Numerous Community meetings since 1995, Comments to Master Plan, dated Nov 19, 1997, Comments at KCIA Open House, February 18, 1998.
- Ref. 10: FAA Airport Design, Advisory Circular AC. 150/5300-13 dated Sept. 29, 1989, with Changes 1-5.
- Ref. 11: FAA Safety/Certification Policy 95-08 dated November 20, 1995, issued by NW Mountain Region, Airports Division
- Ref. 13 Georgetown Crime Prevention and Community Council, numerous letters 1996-1998
- Ref. 14 Seattle King County Health dept. data, Hospitalization Rates for Georgetown, 1991-1995, letter to L. Dove dated March 12, 1998
- Ref. 15 ATSDR letter to L. Dove, dated February 9, 1998
- Ref. 16 KCIA budget for 1998
- Ref. 17 KCIA Ad Hoc Noise Committee minutes, dated February 2, 1998
- Ref. 18 Georgetown Crime Prevention and Community Council, numerous letters dated 1997-1998.
- Ref. 19 Job description of KCIA Noise Officer, dated February 14, 1996.
- Ref. 20 Comments to KCIA Master Plan, dated November 19, 1997
- Ref. 21 KCIA Forecast Analysis, dated April 6, 1998